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Amendments to the Claims:

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

Claim 1 (currently amended): A method for processing a speech signal, comprising:

using a memory, coupled to a processor, to receive ~~receiving~~ an input speech signal;

using the processor to construct ~~constructing~~ a phoneme lattice for the input speech signal;

determining vertices and arc parameters of the phoneme lattice for the input speech signal;

searching the phoneme lattice to produce a likelihood score for each potential path; and

determining a processing result for the input speech signal based on the likelihood score of each potential path;

wherein constructing the phoneme lattice includes:

segmenting an input speech signal into frames,

extracting acoustic features for a frame of the input speech signal,

determining K-best initial phoneme paths leading to the frame based on a first score of each potential phoneme path leading to the frame, and

calculating a second score for each of the K-best phoneme paths for the frame;

wherein searching the phoneme lattice comprises:

receiving a phoneme lattice;

traversing the phoneme lattice via potential paths;

computing a score for a traversed path based on at least one of a phoneme confusion matrix and a plurality of language models; and

modifying the score for the traversed path by allowing repetition of phonemes and allowing flexible endpoints for phonemes in a path such that at least one of a first arc that ends at a first frame and a second arc that starts at a third frame is extended so that the first arc and the second arc are directly connected at a second frame.

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Claim 2 (canceled)

Claim 3 (previously presented): The method of claim 1, wherein determining vertices and arc parameters of the phoneme lattice comprises:

clustering together K-best initial phoneme paths for at least one consecutive frame; and

selecting M-best refined phoneme paths among the clustered phoneme paths based on second scores of these paths.

Claim 4 (previously presented): The method of claim 1, wherein the first score and the second score comprise a score based on phoneme acoustic models and language models.

Claims 5 - 6 (canceled)

Claim 7 (original): The method of claim 1, wherein determining the processing result comprises determining at least one of the following: at least one candidate textual representation of the input speech signal and a likelihood that the input speech signal contains targeted keywords.

Claims 8-14 (canceled)

Claim 15 (currently amended): A method for distributing speech processing, comprising:

using a memory, included in a client, to receive ~~receiving~~ an input speech signal ~~by a client~~;

using a processor, included in the client and coupled to the memory, to constructing a phoneme lattice for the input speech signal ~~by the client~~;

determining vertices and arc parameters of the phoneme lattice for the input speech signal;

transmitting the phoneme lattice from the client to a server; and

searching the phoneme lattice to produce a result for the input speech signal for the purpose of at least one of recognizing speech and spotting keywords, in the input speech signal;

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wherein constructing the phoneme lattice includes:

segmenting an input speech signal into frames,

extracting acoustic features for a frame of the input speech signal,

determining K-best initial phoneme paths leading to the frame based on a first score of each potential phoneme path leading to the frame, and

calculating a second score for each of the K-best phoneme paths;

wherein searching the phoneme lattice comprises:

receiving a phoneme lattice;

traversing the phoneme lattice via potential paths;

computing a score for a traversed path based on at least one of a phoneme confusion matrix and a plurality of language models; and

modifying the score for the traversed path by allowing repetition of phonemes and allowing flexible endpoints for phonemes in a path such that at least one of a first arc that ends at a first frame and a second arc that starts at a third frame is extended such that the first arc and the third arc are directly connected at a second frame.

Claim 16 (canceled)

Claim 17 (previously presented): The method of claim 15, wherein determining vertices and arc parameters of the phoneme lattice comprises:

clustering together K-best initial phoneme paths for at least one consecutive frame; and

selecting M-best refined phoneme paths among the clustered phoneme paths based on second scores of these paths.

Claim 18 (previously presented): The method of claim 15, wherein the first score and the second score comprise a score based on phoneme acoustic models and phoneme language models.

Claims 19 - 23 (canceled)

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Claim 24 (previously presented): A speech processing system, comprising:

a phoneme lattice constructor to construct a phoneme lattice for an input speech signal;

a phoneme lattice search mechanism to search the phoneme lattice for the purpose of at least of recognizing speech and spotting keywords, in the input speech signal;

a plurality of models for lattice construction; and

a plurality of models for lattice search;

wherein the phoneme lattice constructor includes:

an acoustic feature extractor to segment the input speech signal into frames and to extract acoustic features for a frame,

a phoneme path estimator to determine K-best initial phoneme paths leading to the frame,

a global score evaluator to determine M-best refined phoneme paths based on a cluster of K-best paths of at least one consecutive frame, and

a lattice parameter identifier to identify lattice vertices and arc parameters based on M-best refined phoneme paths of each frame, wherein at least one of a first arc that ends at a first frame and a second arc that starts at a third frame is extended such that the first arc and the third arc are directly connected at a second frame.

Claim 25 (canceled)

Claim 26 (original): The system of claim 24, wherein the plurality of models for lattice construction comprise a plurality of phoneme acoustic models and a plurality of language models.

Claim 27 (original): The system of claim 24, wherein the plurality of models for lattice search comprise a phoneme confusion matrix and a plurality of language models.

Claims 28 - 36 (canceled)

Claim 37 (canceled)

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Claim 38 (canceled)

Claim 39 (canceled)

Claim 40 (canceled)

Claim 41 (original): The article of claim 37, wherein content for searching the phoneme lattice comprises content for:

receiving a phoneme lattice;

traversing the phoneme lattice via potential paths;

computing a score for a traversed path based on at least one of a phoneme confusion matrix and a plurality of language models; and

modifying the score for the traversed path.

Claim 42 (original): The article of claim 41, wherein content for modifying the score comprises content for adjusting the score by at least one of the following: allowing repetition of phonemes and allowing flexible endpoints for phonemes in a path.

Claim 43 (original): The article of claim 37, wherein content for determining the processing result comprises content for determining at least one of the following: at least one candidate textual representation of the input speech signal and a likelihood that the input speech signal contains targeted keywords.

Claims 44 - 50 (canceled)

Claim 51 (previously presented): An article comprising: a machine accessible medium having content stored thereon, wherein when the content is accessed by a processor, the content provides for distributing speech processing by:

receiving an input speech signal by a client;

constructing a phoneme lattice for the input speech signal by the client;

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determining vertices and arc parameters of the phoneme lattice for the input speech signal;

transmitting the phoneme lattice from the client to a server; and

searching the phoneme lattice to produce a result for the input speech signal for the purpose of at least one of recognizing speech and spotting keywords, in the input speech signal;

wherein constructing the phoneme lattice includes:

segmenting an input speech signal into frames,

extracting acoustic features for a frame of the input speech signal,

determining K-best initial phoneme paths leading to the frame based on a first score of each potential phoneme path leading to the frame, and

calculating a second score for each of the K-best phoneme paths;

wherein searching the phoneme lattice comprises:

receiving a phoneme lattice;

traversing the phoneme lattice via potential paths;

computing a score for a traversed path based on at least one of a phoneme confusion matrix and a plurality of language models; and

modifying the score for the traversed path by allowing repetition of phonemes and allowing flexible endpoints for phonemes in a path such that at least one of a first arc that ends at a first frame and a second arc that starts at a third frame is extended so that the first arc and the second arc are directly connected at a second frame.

Claim 52 (canceled)

Claim 53 (previously presented): The article of claim 51, wherein determining vertices and arc parameters of the phoneme lattice comprises:

clustering together K-best initial phoneme paths for at least one consecutive frame; and

selecting M-best refined phoneme paths among the clustered phoneme paths based on second scores of these paths.

Claims 54 – 59 (canceled)

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